Worksheet - Pictograms, tally charts and block diagrams

Year: Year 2 · 20

Show your working.

Question 1

Question 1 – Read a tally chart *(Section A · Practice)*

Look at the tally chart of children's favourite fruit.

Item	Tally	Total
Apple	𝍸 ||||	9
Banana	𝍸 |	6
Orange	||||	4
Grape	𝍸 ||	7

a. How many children chose apples?
b. Which fruit was least popular?
c. How many more children chose apples than bananas?
d. How many children were asked altogether?

Question 2

Question 2 – Make a tally *(Section A · Practice)*

Mia collects the colours of cars that pass her school. Here are the results. Draw the tally marks and fill in the total for each colour.

Colour	Number of cars
Red	11
Blue	8
White	14
Black	6

a. Draw the tally for red.
b. Draw the tally for white.
c. How many cars were counted altogether?

Question 3

Question 3 – Read a pictogram *(Section A · Practice)*

Class 2 voted for a favourite playground game. The pictogram shows the results.

Tag	★★★★★
Hopscotch	★★★
Football	★★★★★★★
Skipping	★★

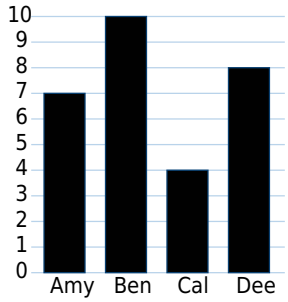
Key: each star stands for 2 children.

a. How many children chose football?
b. How many children chose hopscotch?
c. Which game was the most popular?
d. How many more children chose football than skipping?

Question 4

Question 4 – Read a block diagram *(Section A · Practice)*

The block diagram shows the number of books read by four children in a month.



a. How many books did Ben read?
b. Who read the fewest books?
c. How many more books did Ben read than Cal?
d. How many books did the four children read altogether?

Question 5

Question 5 – Draw a pictogram *(Section A · Practice)*

Draw a pictogram for this data about how Year 2 children travel to school. Use a key of 1 star = 2 children.

Travel	Children
Walk	8
Car	6
Bus	4

Travel	Children
Bike	2

a. How many stars do you draw for walk?
b. How many stars for car, bus and bike?
c. What is the total number of children?

Question 6

Question 6 – Read a table *(Section A · Practice)*

The table shows the weather in four days.

Day	Temperature (°C)	Rain (mm)
Monday	14	3
Tuesday	17	0
Wednesday	12	8
Thursday	15	1

a. Which day was the warmest?
b. Which day had the most rain?
c. How much warmer was Tuesday than Wednesday?
d. On which days was the temperature above 14 °C?

Question 7

Question 7 – The school survey *(Section B · Real-life practice)*

The school council is asking Year 2 children what they would like for the new playground. The children each vote once. The tally chart shows the votes. The council can only buy the two most popular items.

Item	Tally	Total
Slide	𝍸 𝍸 ||	12
Swings	𝍸 ||||	9
Climbing frame	𝍸 𝍸 𝍸	15
Sandpit	𝍸 |	6

a. How many children voted altogether?
b. Which two items will the council buy?
c. How many more children chose the climbing frame than the sandpit?
d. Draw a pictogram with a key of 1 star = 3 children for the swings. How many stars are needed?

Question 8

Question 8 – Sports day medals *(Section B · Real-life practice)*

At sports day, the four houses win medals. The pictogram shows how many medals each house won. Each medal picture stands for 5 medals.

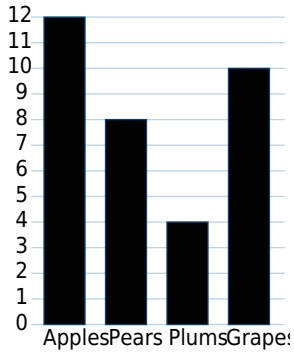
Red	★★★★
Blue	★★★
Green	★★★★★
Yellow	★★

a. How many medals did Green win?
b. How many medals did Blue win?
c. Which house won the fewest medals?
d. How many medals were won altogether?

Question 9

Question 9 – The fruit stall *(Section B · Real-life practice)*

A market stall sells fruit. The block diagram shows how many kilograms of each fruit were sold on Saturday. The stall owner wants to order more of the fruit that sells best.



a. How many kilograms of apples were sold?
b. Which fruit sold the least?
c. How many more kilograms of grapes than plums were sold?
d. How many kilograms of fruit were sold altogether?

Question 10

Question 10 – Birthday months *(Section B · Real-life practice)*

Mr Evans asks the children in Class 2 which season their birthday is in. The results are shown in the table. There are 24 children in the class, but one child was away.

Season	Number of children
Spring	5
Summer	8

Season	Number of children
Autumn	4
Winter	6

a. How many children gave an answer?
b. Which season has the most birthdays?
c. How many children have a birthday in spring or summer?
d. Show the summer birthdays in a pictogram where 1 star = 2 children. How many stars?

Question 11

Question 11 – Pets at home *(Section B · Real-life practice)*

Class 2 made a pictogram about the pets that the children have at home. Each picture stands for 2 pets. Some children have more than one pet.

Dogs ★★★★
Cats ★★★★★
Rabbits ★★
Fish ★★★★★★

a. How many cats are there?
b. How many fish are there?
c. How many more fish than rabbits?
d. There are 34 pets altogether. Check this by adding the rows.

Question 12

Question 12 – Reading minutes *(Section B · Real-life practice)*

Four children keep a reading diary. The table shows the number of minutes that each child read from Monday to Wednesday. They each want to reach 60 minutes by Wednesday.

Name	Monday	Tuesday	Wednesday
Asha	15	20	25
Ben	10	15	20
Cal	20	20	10
Dee	5	25	30

a. How many minutes did Asha read altogether?
b. Who read the most altogether?
c. Who reached 60 minutes? Show your working.
d. How many minutes short of 60 was Ben?

Question 13

Question 13 – Ice cream day *(Section B · Real-life practice)*

At the beach kiosk, the owner records the ice creams that she sells on a hot day. She uses a tally chart. She says that vanilla sold the most, but she is not sure.

Item	Tally	Total
Vanilla	𝍸 𝍸 𝍸 |	16
Strawberry	𝍸 𝍸 |	11
Chocolate	𝍸 𝍸 ||||	14
Mint	𝍸	5

a. How many vanilla ice creams were sold?
b. Which flavour sold the least?
c. How many more vanilla than strawberry were sold?
d. How many ice creams were sold altogether?

Question 14

Question 14 – Playing board games *(Section B · Real-life practice)*

On a rainy day the children in Class 2 play board games at break time. Mrs Ali writes the number of children who play each game in a tally chart, and she wants to put the most popular game on the shelf nearest the door.

Item	Tally	Total
Snakes and ladders	𝍸 ||||	9
Dominoes	𝍸 ||	7
Draughts	||||	4
Ludo	𝍸 𝍸	10

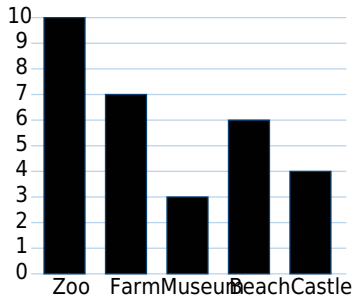
a. How many children play dominoes?
b. Which game should go nearest the door?
c. How many more children play Ludo than draughts?
d. How many children are playing board games altogether?

Question 15

Question 15 – Planning a class trip *(Section C · Problem solving)*

Year 2 vote for where to go on their class trip. The votes are shown in a block diagram. Only places with more than 5 votes will be considered. The class has 30 children, and

everyone votes once.



a. How many children voted for the zoo?
b. Which places have more than 5 votes?
c. How many children voted altogether? Does it match 30?
d. How many more children voted for the zoo than the castle?
e. The teacher says that more than half the class voted for the zoo or the farm. Is she right? Half of 30 is 15.

Question 16

Question 16 – The weather diary *(Section C · Problem solving)*

The children of Class 2 collect weather data for two weeks. Each day they record the weather as sunny, cloudy or rainy. They make a tally chart.

Item	Tally	Total
Sunny	𝍸 |	6
Cloudy	𝍸	5
Rainy	|||	3

a. How many days were sunny?
b. How many days did they record altogether?
c. Draw a pictogram. Use the key 1 symbol = 2 days. How many symbols do you need for sunny, cloudy and rainy? (Use half symbols if needed.)
d. How many more sunny days than rainy days?
e. What is the least popular weather? Explain how the tally shows this.

Question 17

Question 17 – Cars outside the school *(Section C · Problem solving)*

Dev counts the cars that stop outside the school gate. He counts for 20 minutes each morning. The table shows his results for four mornings. He wants to know which morning is the busiest.

Morning	Small cars	Vans	Buses
Monday	12	3	2

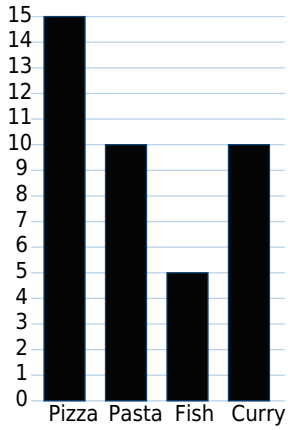
Morning	Small cars	Vans	Buses
Tuesday	15	4	1
Wednesday	10	5	3
Thursday	13	2	2

a. How many vehicles did he count on Monday?
b. How many vehicles did he count on each of the other mornings?
c. Which morning was the busiest? Explain.
d. How many vans did he count altogether in the four mornings?
e. How many more small cars than buses were there on Tuesday?

Question 18

Question 18 – The school lunch vote *(Section C · Problem solving)*

The cook asks 40 children to choose a new lunch for Friday. The block diagram shows the results. The scale goes up in 5s. The cook will put the winning lunch on the menu.



a. How many children chose pizza?
b. How many children chose pasta or curry?
c. How many children voted altogether? Does it match 40?
d. Which lunch won? How many more votes did it get than fish?
e. How many children would need to change their vote from pasta to pizza to make pizza have double the votes of fish?

Question 19

Question 19 – Collecting stickers *(Section C · Problem solving)*

Four friends collect stickers. The pictogram shows how many stickers each child has. Each sticker picture stands for 10 stickers. They want to swap stickers so that everybody has the same number.

Ali ★★★★
Bea ★★★
Cy ★★★★★
Di ★★

a. How many stickers does each child have?
b. How many stickers do they have altogether?
c. If they share the stickers equally between the four children, how many stickers does each child get?
d. How many stickers must Cy give away to reach that number?
e. How many stickers must Di receive to reach that number?

Question 20

Question 20 – Challenge: data detective *(Section D · Challenge)*

Otto has hidden some numbers in a tally chart. Use the clues to find them. Explain how you know.

a. There are 24 votes in a chart with three pets. Dogs have 10 votes. Cats have 4 more votes than fish. How many votes do cats and fish each have?
b. In a pictogram 1 star = 4 children. A row has 6 stars. Another row has half as many children. How many stars does the second row have?
c. In a block diagram the scale goes up in 2s. A bar is halfway between 6 and 8. What number does it show?
d. Ava says, "The longest tally always shows the most popular item." Is she right? Explain.